

## 2. St James' Hollow



This impressive hole in the ground covers some 7 acres (2.8 ha), and is now mostly woodland. Once known as Vials Pit, it is one of the biggest chalk and gravel pits in the Norwich area, and must have been active for many centuries.

The kilns where the chalk was 'burnt' (calcined) to make builders' lime once stood in the lower part of the pit, but have now been demolished. Flint was also a valuable product, and a 16th century map shows 'stone mine pits' in this area. St James' Hollow was partly landscaped and turned into a children's playground in 1929.

1. St James' Hollow in 1885, showing the position of the kiln. Reproduced from Ordnance Survey map 1:25,000, 1885.



Chalk is a limestone laid down in tropical seas during the Cretaceous period. The beds exposed here are about 75 million years old, and belong to the Mucronata Zone of the Campanian Stage; beds of the same age are exposed in other parts of the world, eg Russia and Arkansas.

St James' Hollow is a Site of Special Scientific Interest designated for its geological importance. It is thought to be the best place in Britain to find the fossil remains of the marine reptile *Mosasaurus*.

2. A *Mosasaurus* tooth from St James' Pit, in the collection of the British Geological Survey.



3. A *Mosasaurus* jaw fragment from the chalk of Ramsgate, Kent, showing the arrangement of teeth.



4. A *Mosasaurus* hunting belemnites. This powerful predator resembled a kind of crocodile with flippers, and could reach 15 m (50 ft) in length.



5. A section through the early Pleistocene sea bed: sands and clays of the Norwich Crag Basement Bed overlying an undulating surface of chalk bedrock.

**Access to St James' Hollow:**  
via a path from Gurney Road or steps from Heathgate.  
Take care in the Hollow: the paths can be very slippery and muddy in winter!

## Chalk caves



The Chalk has played a big role in the history of Norwich: it outcrops along the sides of the Wensum and Yare valleys, and was mined and quarried since the Middle Ages as a ready source of flint and builders' lime. It left a legacy of old pits and tunnels, and parts of the city are honeycombed with these tunnels, which sometimes collapse and cause ground subsidence.

Remember the story of the bus which sank into Earham Road?

6. St James' Hollow circa 1910.

### *XVI. An Account of large subterraneous Caverns in the Chalk Hills near Norwich; by Mr. Wm. Arderon, F. R. S.*

*About a quarter of a mile from the city of Norwich on the east side thereof, and near the entrance of Mousehold-Heath, is a large subterraneous Cavern, which has been formed by the digging out of Chalk for the making of Lime. ... The whole Area within is of such a large Extent, that twenty thousand Men might with great Ease be plac'd therein... From the Entrance to the furthest Part of these darksome Cells, measures full four hundred yards...*

Extract from a letter from William Arderon, published in the Philosophical Transactions of the Royal Society no. 45, 1748. A postscript adds:

*A terrible Thunder-storm, June 12, 1748, shook the Earth to such a degree as to throw down those Chalk-Vaults.*

Maybe St James' Hollow is part of the hole left after the collapse of the 'cavern'?

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